DMR Pollutant Loading Tool Version 1.0

DATA EXPLORER USER GUIDE

You have a new tool for analyses of wastewater pollutant discharge data. This tool, the Discharge Monitoring Report Pollutant Loading Tool (abbreviated "Loading Tool") provides you with pollutant loadings you can use to answer questions about the amount and toxicity of pollutant discharges to U.S. waters.

The tool calculates pollutant loadings from monitoring and permit data from EPA's Permit Compliance System (PCS) and Integrated Compliance Information System for the National Pollutant Discharge Elimination System (ICIS-NPDES). The tool also includes wastewater pollutant discharge data from EPA's Toxics Release Inventory (TRI). Data are available for the years 2007 through 2010. This tool helps you access wastewater pollutant discharge data, if you are a general user or if you are a more technical user:

- If you are a **general user**, you can use the *EZ Search* or *TRI Search* to quickly find discharge monitoring data or TRI data based on simple searches.
- If you are a **technical user** (e.g., NPDES permit writer, watershed modeler, or regulatory agency), you can use the *Advanced Search* to access more detailed discharge monitoring data that you can download in a comma-separated value (CSV) file for further analysis in your own software application.

You can navigate the Loading Tool home page using the eight tabs described in Table 1.

Table 1. Loading Tool Tabs and Descriptions

Tab	Description
Overview	Provides general information about the tool including: (1) How to Navigate the Tool; (2) Loading Tool Data Sources; (3) Data Scope and Limitations; and (4) 2010 Beta Release and Testing.
EZ Search	General users can perform simple searches using DMR data. Results are displayed on a Web page in "top ten" lists to help you determine which discharges are important, which facilities and industries are producing these discharges, and which watersheds are impacted.
TRI Search	Similar search interface and display results as EZ Search but the data source is TRI data
Facility Search	Provides direct access to facility-level information, one facility at a time.
Advanced Search	Designed for technical users and provides increased flexibility on search criteria and data to be downloaded as a CSV file for post processing by the user.
Data Explorer	General users can create a thematic map of the United States in which states are shaded in blue in proportion to the user's search criteria. For example, the user can visually see the number of POTWs in each state with states shaded in dark blue having the most number of POTWs.
Everyday Searches	Provides access to trend charts and other 'canned' searches (by geographic location, industry sector, and/or pollutant) of DMR data that are often used by technical users. In particular, the "Facility Loading Calculations" on this tab details exactly how the tool calculates annual pollutant loads using DMR data
Users Guide/Technical Documents	Provides the instructions, guides, and metadata to assist users with the Loading Tool.

This document provides guidance for using the Data Explorer Searches. You can find guidance for using the EZ Search, Facility Search, and Advanced Search in the *User's Guide for using the EZ Search, Facility Search, and Advanced Search*; the Everyday Searches feature in the *User's Guide for using the Everyday Searches Tab*; and the TRI Search in the *User's Guide for using the TRI Search Tab*.

Data Explorer Search Options

In the Data Explorer search tab you can perform simple searches with the results displayed on a shaded U.S. map. You can search facilities in PCS and ICIS-NPDES using the following search options:

- Year Search Option;
- Facility Search Option;
- Pollutant Search Option; and
- Industry Search Option.

Based on your search selections, the results (representing either counts of facilities or percentages of facilities) inform the map shading. Darker areas on the map represent a greater number of facilities or higher percentage of facilities meeting the search criteria. The Data Explorer search page is shown in Figure .

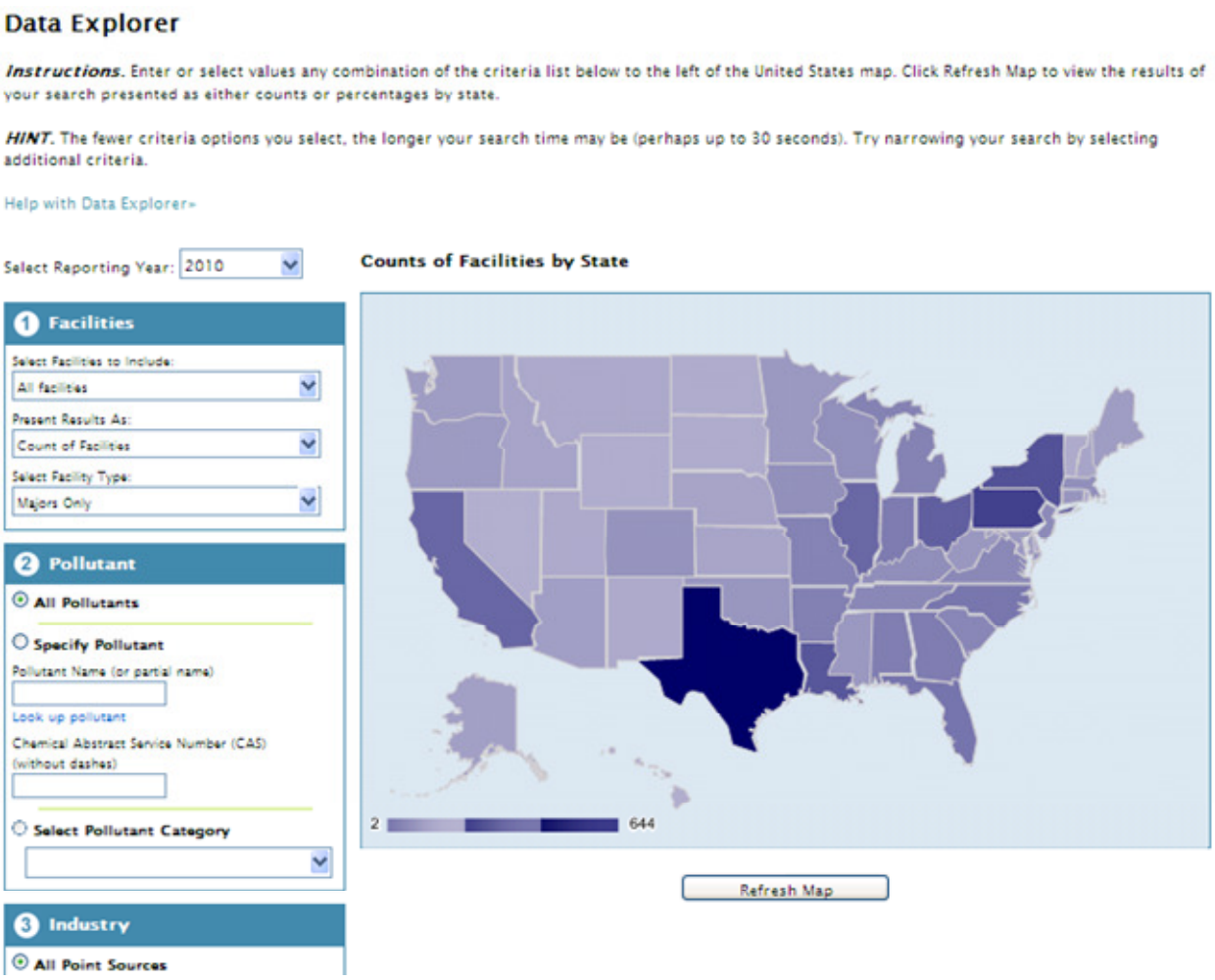

Figure 1. Data Explorer Search Page

Year Search Option

By default, Data Explorer reports results for reporting year 2010. However, you can access data for 2007, 2008, 2009, or 2010. Select the year of interest using the menu shown in Figure 1.

Figure 1. Year Search Option

Facility Search Option

Figure 3 presents the Facility Search options. By default, the Data Explorer calculates counts of all facilities in the United States. You can alter the map shading by specifying the type of data available for the facility: Facilities with Loadings Data, Facilities with Permit Limits, or Facilities with Limit Exceedances. You can also choose to present results either as total facility counts or percentages. For example, if you select Facilities with Loadings Data and choose to present results as a percentage, the Loading Tool will shade the map based on state percentages, which the Loading Tool calculates as follows:

State Percentage = [Count of Facilities with Loadings Data/ Count of All Facilities in State] x 100

Additionally, you can filter results for majors or minors. So if you choose to filter the above results on majors, the Loading Tool calculates results as follows:

State Percentage = [Count of Major Facilities with Loadings Data/ Count of All Major Facilities in State] x 100

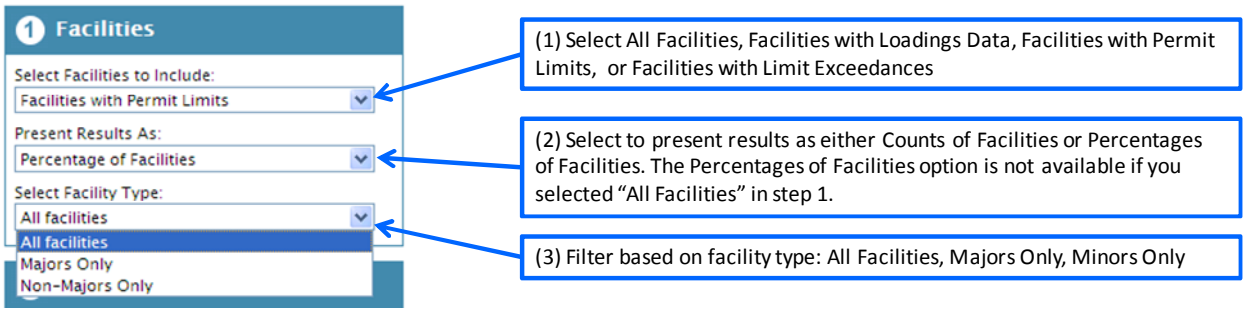

Figure 2. Facility Search Option

Pollutant Search Option

Permit and DMR data in PCS and ICIS-NPDES include approximately 1,000 pollutant parameters including specific chemicals (e.g., phenol), bulk parameters (e.g., biochemical oxygen demand), temperature, and wastewater flow. By default, the Data Explorer does not filter results based on pollutants. Specifying a single pollutant of interested (by name or CAS number) or selecting a pollutant category, as shown in Figure 3, will narrow the search to only include facilities that have permit or DMR data in PCS or ICIS-NPDES for the specified pollutant or pollutant category.

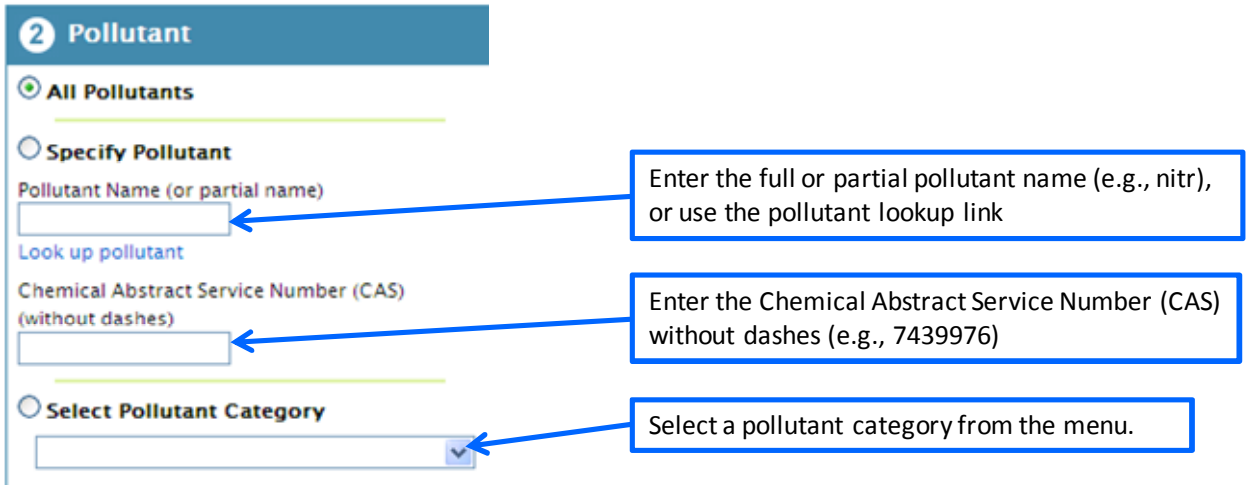

Figure 3. Pollutant Search Option

Industry Search Option

PCS and ICIS-NPDES contain data for approximately 140,000 publicly- and privately-owned facilities with operations covering more than 900 Standard Industrial Classification (SIC) Codes. By default, the Data Explorer does not filter results based on ownership or industrial classification. You can alter results to include only municipal wastewater treatment plants (publicly-owned treatment works, i.e., POTWs) or facilities in industrial point sources. You can further narrow searches for industrial point sources to only include results for a specific Point Source Category, 2-Digit SIC code, 4-digit SIC code, or 2-digit NAICS code, shown in Figure 4.

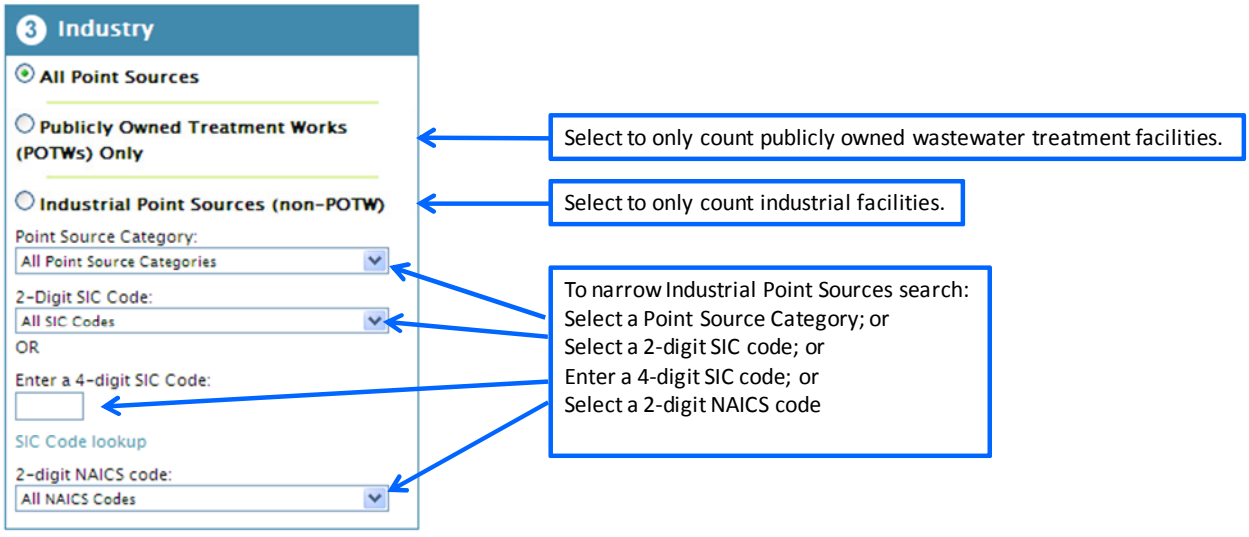

Figure 4. Industry Search Option

Example Data Explorer Searches

You can use the Year, Facility, Pollutant, and Industry search options in combination to answer questions, such as:

- Which States have the highest number of POTWs with permit limits for nitrogen (see Figure 6)?
- Which States had the highest percentage of minor facilities with loadings data in 2008 (see Figure 7)?
- Which States have the largest number of Petroleum Refineries with permit or DMR data for selenium (see Figure 8)?

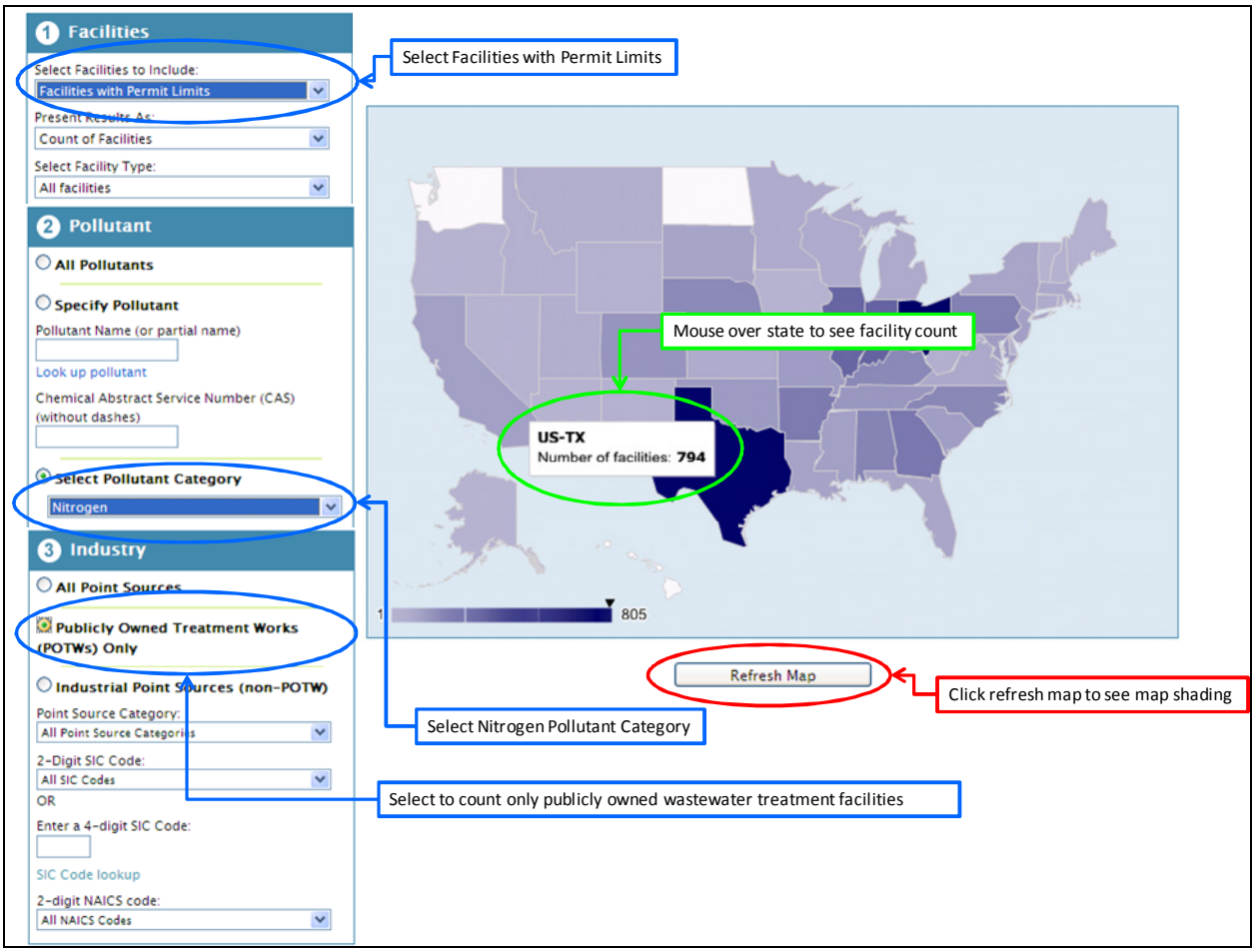

Figure 6. Example Data Explorer Search – POTWs with Permit Limits for Nitrogen

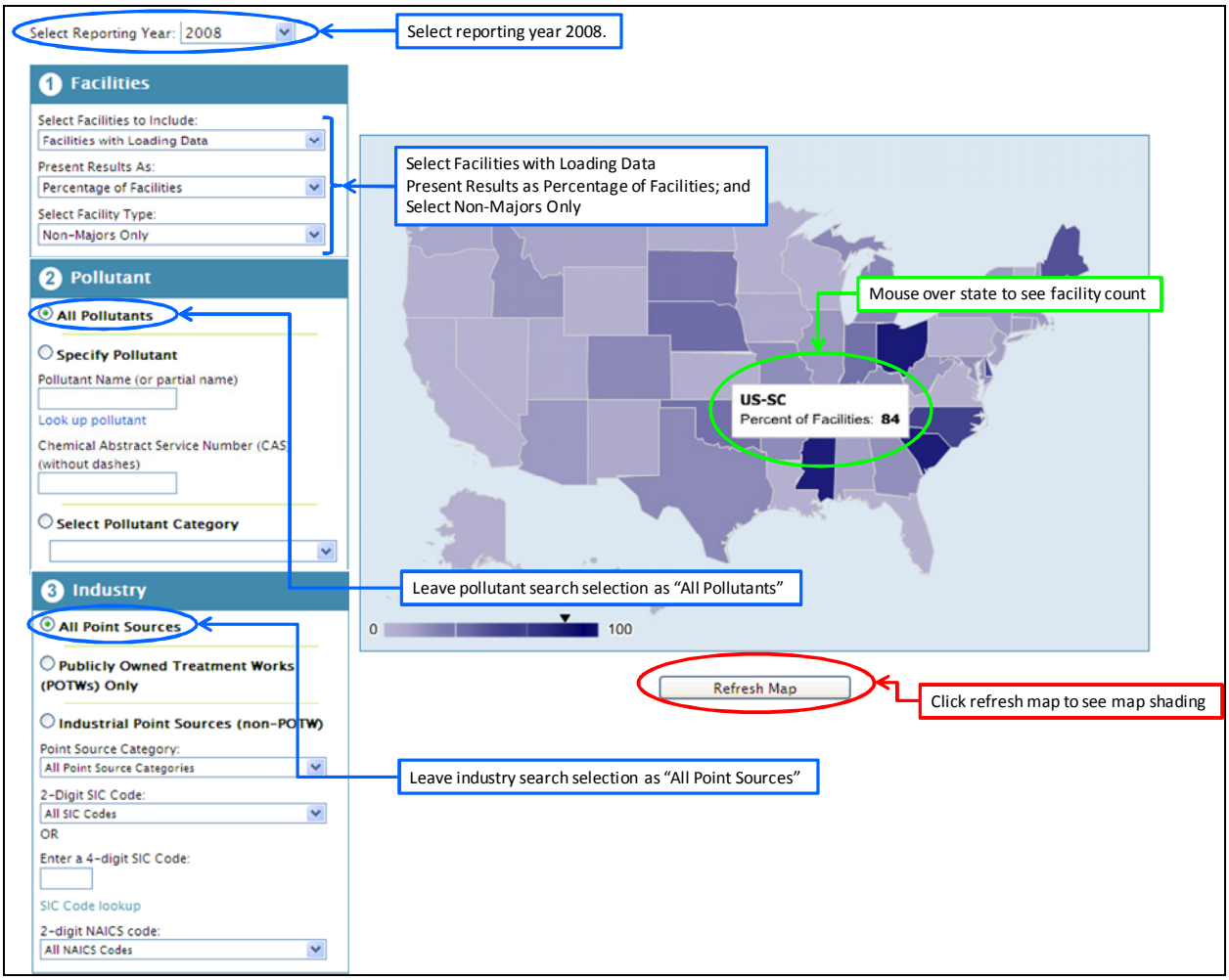

Figure 7. Example Data Explorer Search – Percentages of Non-Majors with Loadings Data

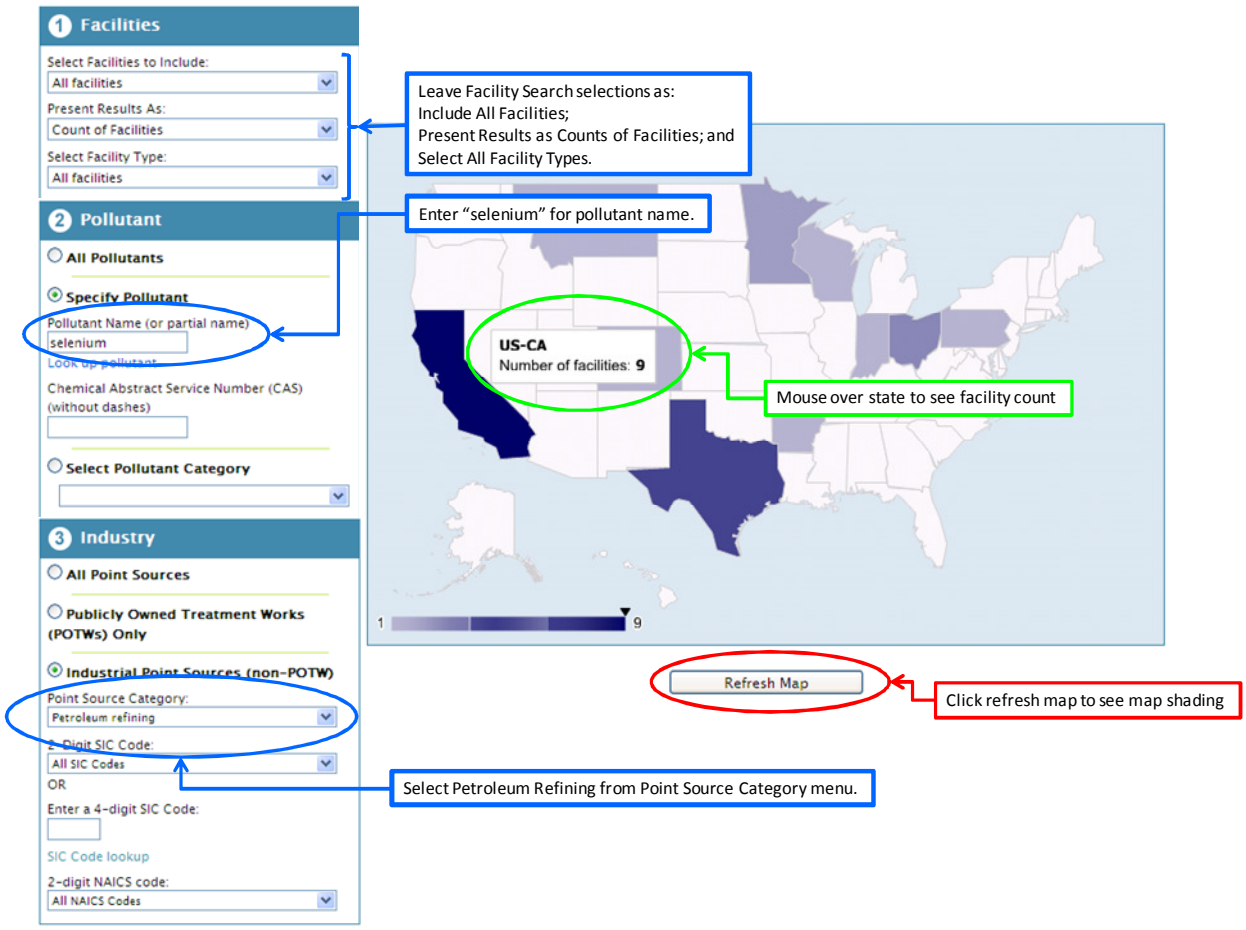

Figure 8. Example Data Explorer Search – Petroleum Refineries with Permit or DMR Data for Selenium